TEAC

SERVICE MANUAL

T-H300DAB

DAB/AM/FM Stereo Tuner

DAB
Digital Audio Broadcasting

For U.K.

CONTENTS

1 SPECIFICATIONS 2
2 EXPLODED VIEWS AND PARTS LIST 3
3 PC BOARDS AND PARTS LIST 5
4 INCLUDED ACCESSORIES 7

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

Effective : January, 2004

S-0111A

1 SPECIFICATIONS

FM Tuner

Tuning range .....87.50 – 108.00 MHz (50 kHz steps)
Signal-to-Noise ratio .....65 dB (Mono)
60 dB (Stereo)

AM Tuner

Tuning range .....522 – 1620 kHz (9 kHz steps)
Signal-to-Noise ratio .....35 dB

DAB Tuner

Tunig range .....Band 3, 174 MHz – 240 MHz
Input .....50 ohms, nominal
Max signal ..... –3 dBm typ
Sensitivity ..... –96 dBm typ
Adjacent Channel Rejection .....35 dB typ
Digital output .....24 bit/48 kHz resolution

Audio output .....Stereo, 2.5 Vp-p

General

Power requirements .....230 V AC, 50Hz
Power consumption .....9 W (STANDBY: 3 W)
Dimensions (W x H x D) .....215 x 85 x 270 mm
Weight .....2.4 kg
Operating temperature .....0 ˚C – 50 ˚C

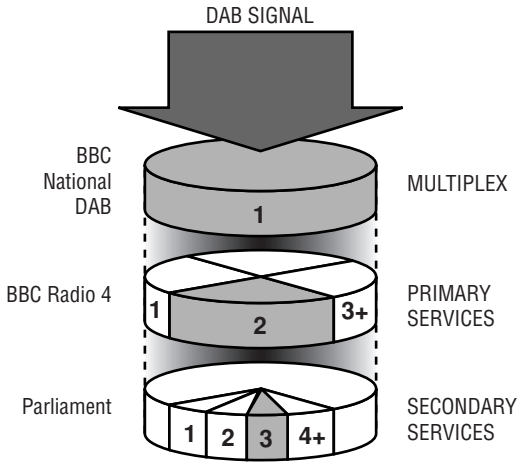
Accessories .....AM loop antenna x 1
FM antenna x 1
DAB antenna x 1
RCA pin cable x 1
Remote control unit x 1
Batteries (AAA, R03, UM-4) x 2

• Design and specifications are subject to change without notice.

About DAB

With this unit you can receive and listen to Digital Audio Broadcast (DAB) programmes. DAB uses digital, not analogue signals, resulting in near CD-quality audio with virtually interference-free reception. Along with superior quality audio, DAB can also deliver additional audio channels and text. In the future, computer data and images are also possible.

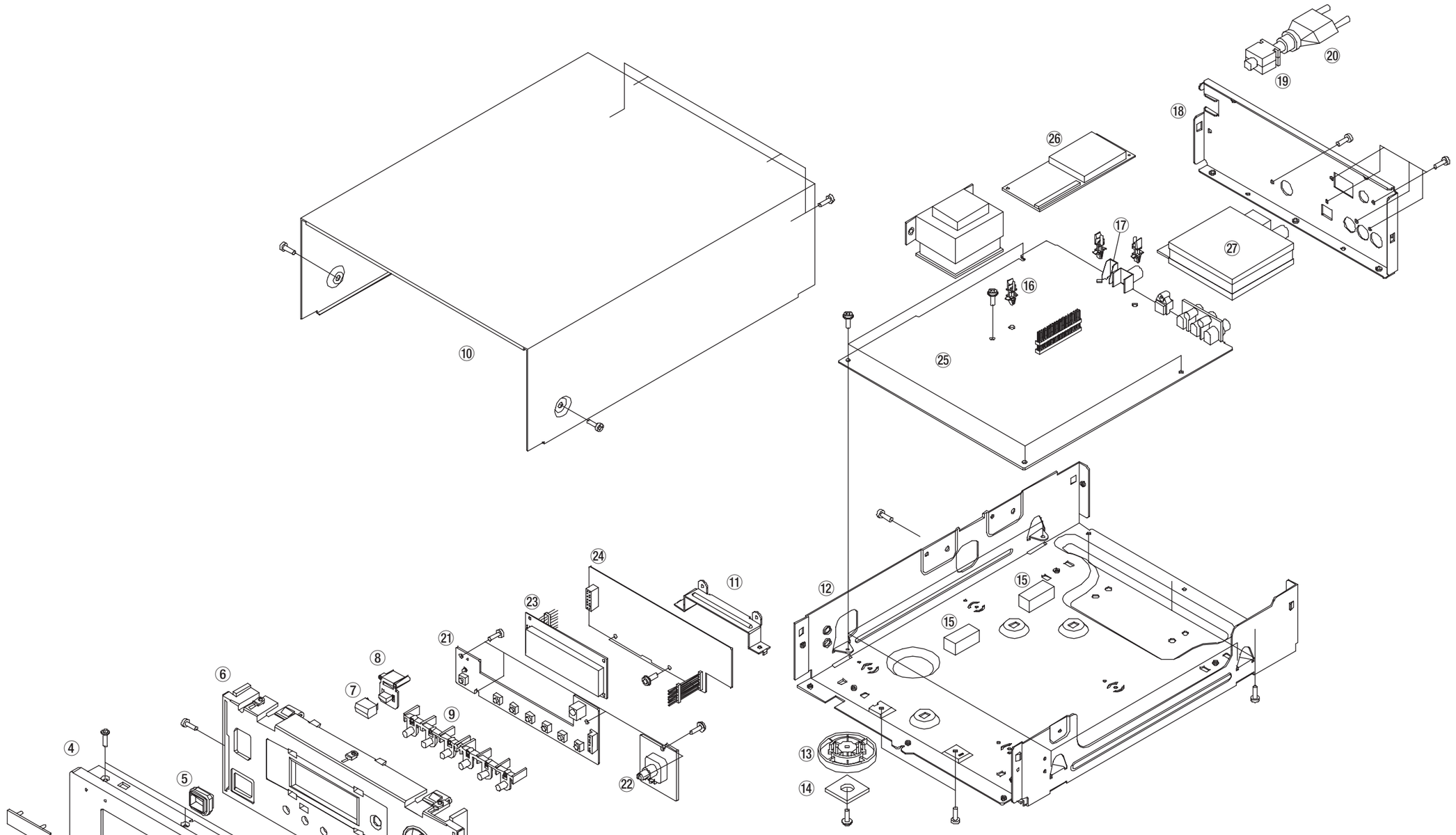
Digital radio is broadcast as groups of data called ensembles or multiplexes. Each multiplex can contain a number of stations (services) and each station contains a primary service and can contain secondary services as illustrated in the following diagram.



Each multiplex is transmitted in a set frequency range and received by this unit for decoding. You can receive multiplexes broadcast in the 174–240 MHz frequency band and store the services in each multiplex for you to access. The number of multiplexes you receive depend on your location. Channels used in the UK are in the range 10A to 12D.

Multiplexes and stations have labels (names) that are used to identify them. Instead of needing to know the particular frequency of your favourite broadcast, you can simply select the station name. Secondary services and additional data such as text or multiplex info are also available.

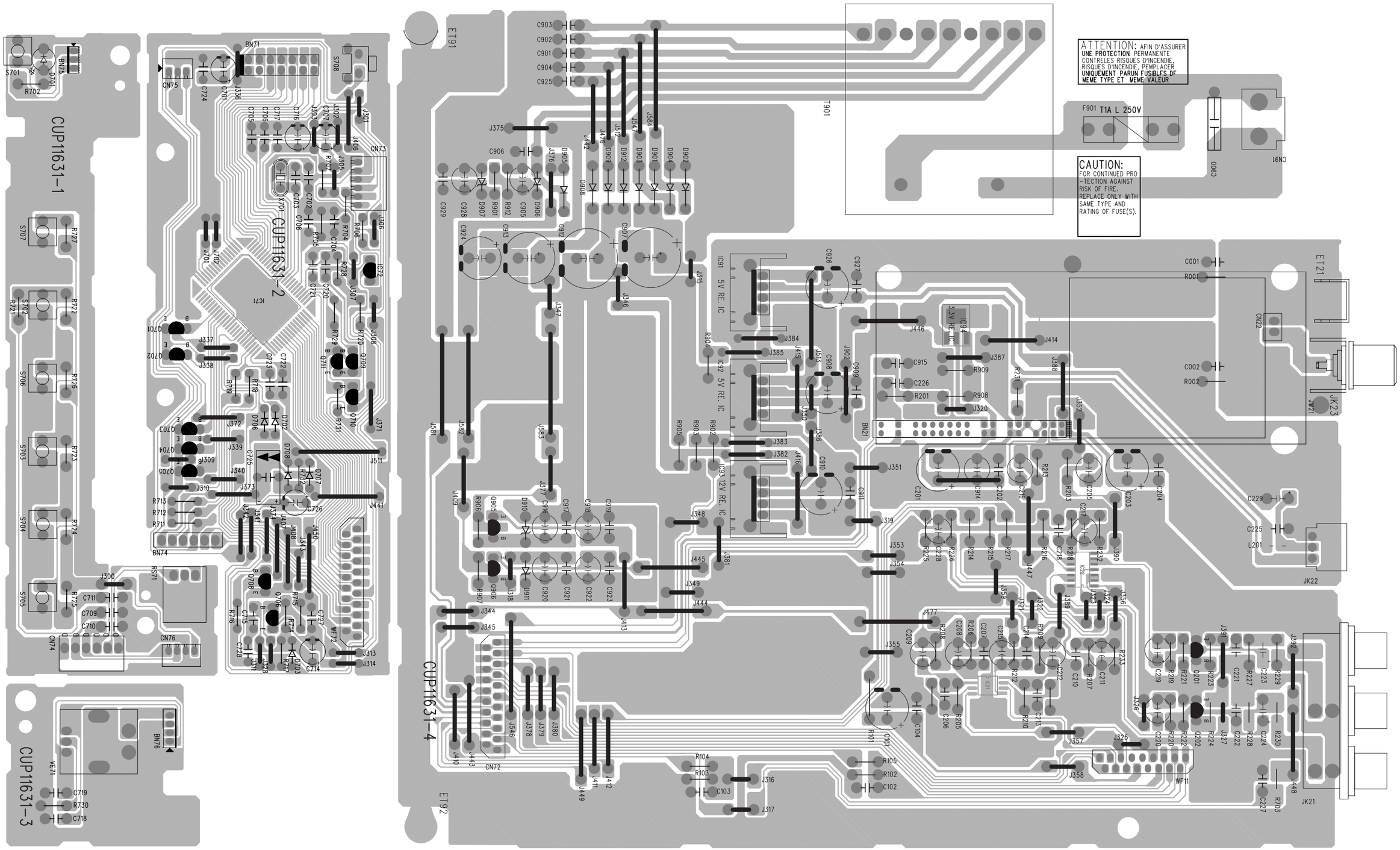
2 EXPLODED VIEWS AND PARTS LIST



EXPLODED VIEW LIST

REF.NO.		PARTS NO.	DESCRIPTION	REMARKS
1		KGB1A047	BADGE	
2		CGU1A154Y	WINDOW	
3		KGX1A217ZA	VOLUME CAP ASSY(B)	
4		KKM2A072ZC11	PANEL,FRONT	
5		CGL1A133	INDICATOR,STAND BY	
6		CGW1A369M9K80	PANEL,SUB	
7		CBT1A495M9K79	CAP,STAND BY	
8		CBT1A483	KNOB,STAND BY	
9		CBT1A492M9K79	KNOB,TACT	
10		CKC1B089S21	CABINET,TOP	
11		CMD1A505	BRACKET,PCB	
12		CUA1A158	CHASSIS,BOTTOM	
13		CKL2A055M9K63	FOOT	
14		KHG1A050Y	CUSHION,FOOT	
15		CHG1A236	CUSHION	
16		CMH1A226	SUPPORT,PCB	
17		CMD1A387	BRACKET,PCB	
18		CKF1A269Z	PANEL,REAR	
19	⚠	KHR1A028	BUSHING,AC CORD	
20	⚠	CJA2E045ZA	CORD,POWER	
21		C0P11631B	PCB ASSY,TEAC DAB	
22		C0P11631B	PCB ASSY,TEAC DAB	
23		HFL16T202DA1E	VFD MODULE	
24		C0P11631B	PCB ASSY,TEAC DAB	
25		C0P11631B	PCB ASSY,TEAC DAB	
26		HNVFS2020VENICE	DAB MODULE	
27		CNVMB114MA18L	TUNER MODULE(EUR)	
F901	⚠	KBA2C1000TLEZ	FUSE	
FIP1		KJP14TT152ZY	PIN HEADER	
		CWC1C4A21B120B	CARD CABLE,21P	
		CWC1C4A17B120B	CARD CABLE,17P	

3 PC BOARDS AND PARTS LIST



TEAC DAB PCB ASSY (GATHER)

REF.NO.		PARTS NO.	DESCRIPTION
		C0P11631B	PCB ASSY,TEAC DAB
		CUP11631Z	PCB,TEAC DAB
		HNVFS2020VENICE	DAB MODULE
BN21		CJP44TT153ZY	PIN,HEADER
BN71		KJP14HA151ZY	PIN,SOCKET
BN74		KJP06TT159ZY	PIN,HEADER
C725		BCES0HD104	C,GOLD 5.5V 0.1
C900	⚠	BCQE2E104KDE	C,LINE ACROSS
C907	⚠	HCEA1CH222E	C,ELECT 16V 2200UF
C912	⚠	HCEA1EH222E	C,ELECT 25V 2200UF
C913	⚠	HCEA1CH102E	C,ELECT 16V 1000UF
C924	⚠	HCEA1CH471T	C,ELECT 16V 470UF
CN22		KJP02TT155ZY	PIN,HEADER
CN72		KJP21GA115ZG	WAFER,CARD CABLE
CN73		KJP06GB46ZM	WAFER
CN74		KJP06HA37ZM	WAFER
CN75		KJP03GB46ZM	WAFER
CN76		KJP04GB46ZM	WAFER
CN91		KJP02KA060ZY	WAFER
D201		HVDMTZJ3.3BT	DIODE,ZENER MTZJ3.3BT
D701		HVD342YCTB7T089	LED,YELLOW
D702		HVD1SS133MT	DIODE,1SS133MT
D703		HVD1SS133MT	DIODE,1SS133MT
D706		HVD1SS133MT	DIODE,1SS133MT
D707		HVD1SS133MT	DIODE,1SS133MT
D708		HVD1SS133MT	DIODE,1SS133MT
D901	⚠	KVD1N4003ST	DIODE,1N4003ST
D902	⚠	KVD1N4003ST	DIODE,1N4003ST
D903	⚠	KVD1N4003ST	DIODE,1N4003ST
D904	⚠	KVD1N4003ST	DIODE,1N4003ST
D905	⚠	KVD1N4003ST	DIODE,1N4003ST
D906		HVD1SS133MT	DIODE,1SS133MT
D907		HVDMTZJ4.7BT	DIODE,ZENER MTZJ4.7BT
D908	⚠	KVD1N4003ST	DIODE,1N4003ST
D909	⚠	KVD1N4003ST	DIODE,1N4003ST
D910		HVDMTZJ6.2BT	DIODE,ZENER MTZJ6.2BT
D911		HVDMTZJ6.2BT	DIODE,ZENER MTZJ6.2BT
D912	⚠	KVD1N4003ST	DIODE,1N4003ST
D913		HVD1SS133MT	DIODE,1SS133MT
ET21		CMD1A387	BRACKET,PCB
ET71		CMD1A501	BRACKET,FIP
ET72		CMD1A501	BRACKET,FIP
ET91		CNE75	PLATE,EARTH
ET92		CNE75	PLATE,EARTH
F901		KJCFC5S	HOLDER,FUSE
IC21		HVINJM2068MDTE1	IC,NJM2068MDTE1
IC22		BVI74HC4066D	IC,74HC4066D
IC71		HVIANAM1371T	IC,FLASH U-COM
IC72		HVIRE5VT28CATZ	IC,RE5VT28CATZ
IC91		CMY2A048	HEAT SINK
IC91	⚠	HVIKA78R05	IC,KA78R05
IC92		CMY2A048	HEAT SINK
IC92	⚠	HVIKA78R05	IC,KA78R05
IC93	⚠	HVIKA78R12	IC,KA78R12
IC94	⚠	HVIRC1117ST	IC,RC1117ST

TEAC DAB PCB ASSY (GATHER)

REF.NO.		PARTS NO.	DESCRIPTION
JK21		CJJ4S003X	TERMINAL,RCA JACK
JK22		HJST0TX179L	MODULE,OPTICAL(TX)
JK23		CJJ3G012Z	ANT,TEMINAL
L201		HLQ02C2R7KT	COIL,AXIAL
Q201		HVTKTC2874BT	TR,KTC2874BT
Q202		HVTKTC2874BT	TR,KTC2874BT
Q701		HVTKRA107MT	TR,KRA107MT
Q702		HVTKRA107MT	TR,KRA107MT
Q703		HVTKRA107MT	TR,KRA107MT
Q704		HVTKRA107MT	TR,KRA107MT
Q705		HVTKRA107MT	TR,KRA107MT
Q708		HVTKRC107MT	TR,KRC107MT
Q709		HVTKRC107MT	TR,KRC107MT
Q710		HVTKRC107MT	TR,KRC107MT
Q711		HVTKRC107MT	TR,KRC107MT
Q905	⚠	HVTKTC3198YT	TR,KTC3198YT
Q906	⚠	HVTKTA1266YT	TR,KTA1266YT
RS71		KRVHIM602H32	SENSOR,REMOCON
S701		HST1A016Z	SW,TACT
S702		HST1A016Z	SW,TACT
S703		HST1A016Z	SW,TACT
S704		HST1A016Z	SW,TACT
S705		HST1A016Z	SW,TACT
S706		HST1A016Z	SW,TACT
S707		HST1A016Z	SW,TACT
S708		KST1A010Z	SW,TACT
T901	⚠	CLT5M026ZE	TRANS,POWER
VE71		HSR2A025Z	ENCODER,SWITCH
WF11		KJP17GA115ZG	WAFER,CARD CABLE
WF72		KJP21GA115ZG	WAFER,CARD CABLE
X701		HOX10000E220C	CRYSTAL

4 INCLUDED ACCESSORIES

INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	CQX1A860Z	OWNER'S MANUAL	
	CARTT-H300DABUK	TRANSMITTER ASSY	
	HABAAAM1.5VHK	BATTERY	
	CJS4N014Z	CORD,PIN	
	KJS4M014Y	CORD,PIN	
	CSA1A018Z	FM 1 POLE ANT	
	CSA1A020Z	AM LOOP ANT	
	CSA272	ANT,DAB T	

TEAC **BLOCK DIAGRAM** **T-H300DAB**

FM
ANTENNA
AM

FM FRONT END
AM ANT /OSC
FM/AM IF
MPX
RDS FILTER
AMP
MUTE
P L L
TUNER MODULE

R-OUT
L-OUT

DAB RF +5V
VFD +5V
TUNER +12V
REGULATOR
REGULATOR
POWER TRANS
AC 230V/50Hz
+5.6V
-5.6V
UNSWITCH

INPUT
OUTPUT
REGULATOR 3.3V

DAB ANT
DAB MODULE

DAB ON

REMOTE SENSOR
KEY SCAN

AUDIO OUT
R-CH
L-CH
REMOTE OUT

R-CH
-VSS -5V
IC22 74HC4066
+VDD +5V
L-CH

-VSS -5V
IC21 NJM2028
+VSS +5V

u-COM(CPU)
S3F84BB
IC71

+5.6V UNSWITCH
TUNER MODULE

FM/AM ON
REMOTE OUT

DIGITAL OUT
VCC
SPDIF OUT

VFD
DAB MODULE

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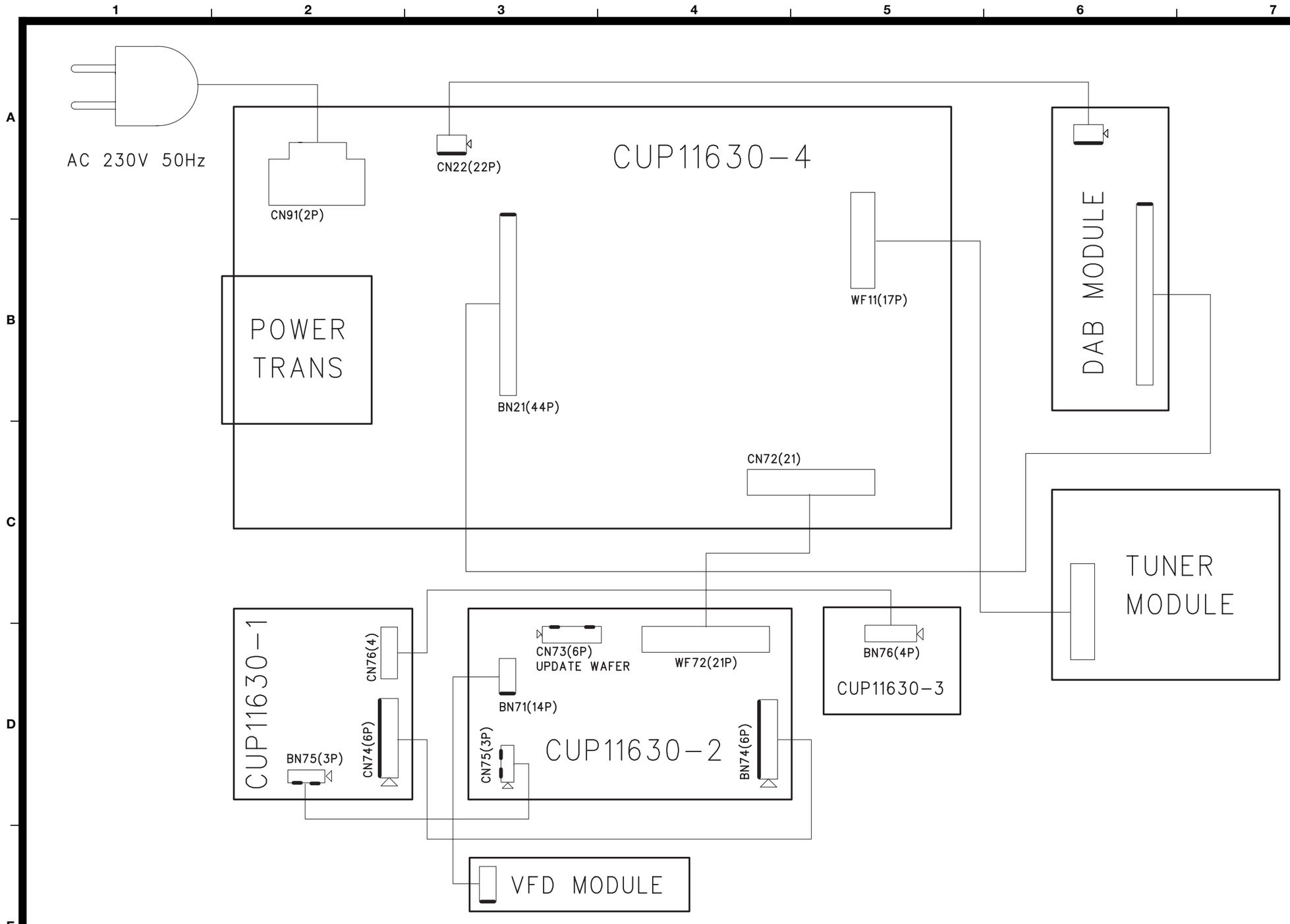
1 st Issue; September 2003

TEAC WIRING DIAGRAM T-H300DAB



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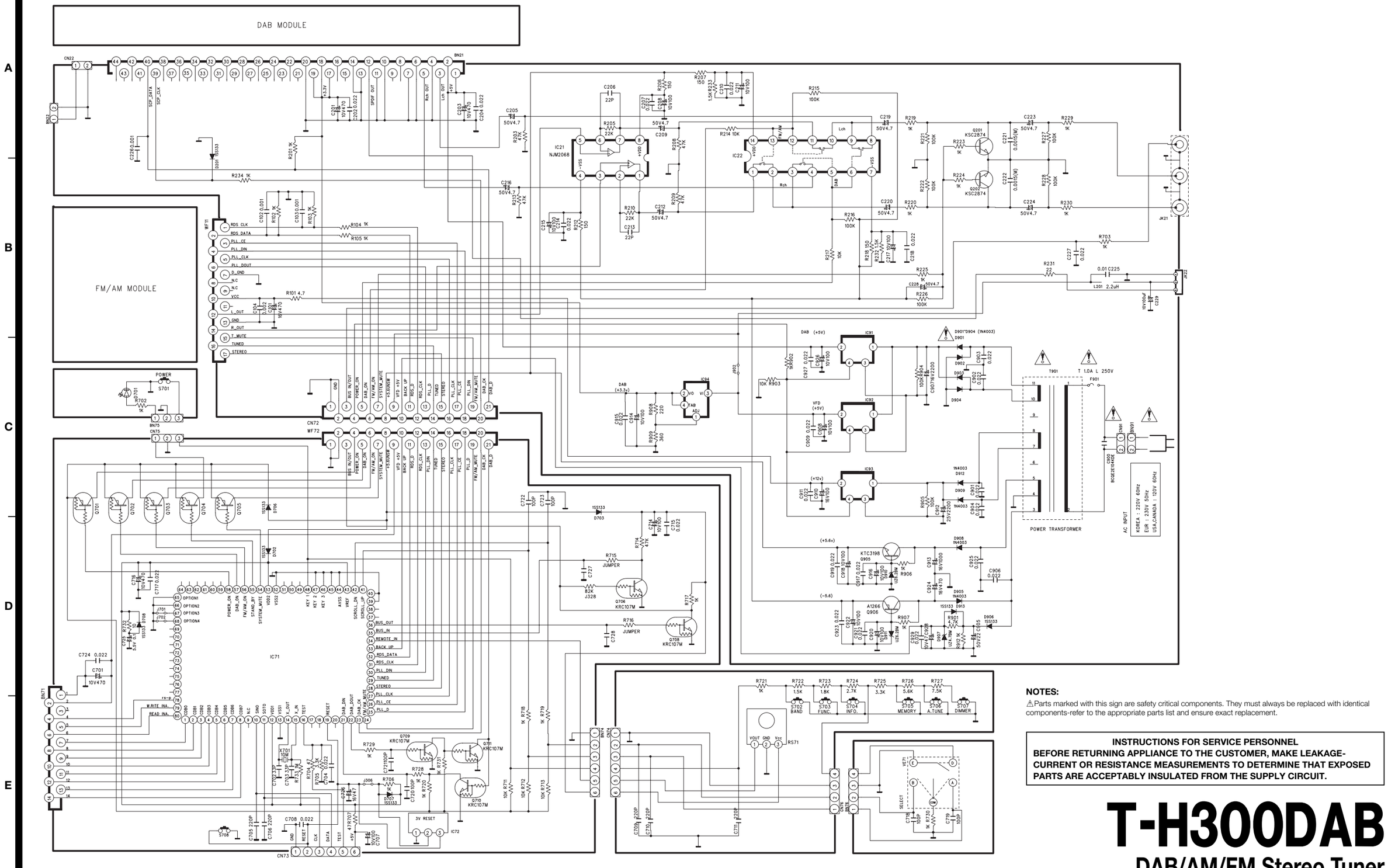
TEAC SCHEMATIC DIAGRAM **T-H300DAB**



NOTES:

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INSTRUCTIONS FOR SERVICE PERSONNEL
BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

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